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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/918,293	07/30/2001	Elisabeth Smela	S-80,400	9877
27479	7590	01/22/2004	EXAMINER	
DOUGHERTY, THOMAS M				
ART UNIT		PAPER NUMBER		
		2834		

DATE MAILED: 01/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/918,293	SMELA ET AL.
	Examiner Thomas M. Dougherty	Art Unit 2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 18 November 2003.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) \_\_\_\_\_ is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-4 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 30 July 2002 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. §§ 119 and 120

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
 a) The translation of the foreign language provisional application has been received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                            | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>1102</u> . | 6) <input type="checkbox"/> Other: _____                                    |

***Response to Arguments***

Applicant's arguments, filed 11/18/03, with respect to paper 5 have been fully considered and are persuasive regarding the Varasprasad et al. ('262) and Jang ('007) references. The 35 USC 102 and 103 rejections of October 21, 2002 based on these two references has been withdrawn.

The arguments however concerning the applicability of the Takahashi et al. ('330) and Brotz ('382) references were not persuasive. While the Examiner concurs with the Applicants' remarks concerning these references with the exception of the placement of an electrical voltage being applied between two locations. While the applicants may intend the locations to be points or at least locations not covering sides of the polymeric material, the language of the claims does not so indicate this meaning of "locations". As Takahashi et al. and Brotz both show their electrodes on sides of the their respective polymers, the electrodes are clearly placed at locations thereon.

For this reason the rejections based on these references are maintained.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Takahashi et al. (US 5,177,330). Takahashi et al. show (fig. 2B) an actuator consisting of a conjugated polymer material, whereby said material expands when an

electrical voltage is applied between two locations thereof (between 11 and 14) and contracts when the electrical voltage is reduced. Said conjugated polymeric material comprises polyaniline (he teaches equivalence of materials at col. 4, ll. 53-59). A method of actuation comprising the step of directly electrically stimulating a conjugated polymeric material at two locations (between electrodes) thereof. As noted said conjugated polymeric material comprises polyaniline.

Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Brotz (US 6,161,382). Brotz shows (e.g. fig. 4) an actuator consisting of a conjugated polymer material (20), whereby said material expands when an electrical voltage is applied between two locations thereof (between electrodes 18 and 22) and contracts when the electrical voltage is reduced. Said conjugated polymeric material comprises polyaniline (col. 4, ll. 11-13). A method of actuation comprising the step of directly electrically stimulating a conjugated polymeric material at two locations (between electrodes 18 and 22) thereof. As noted said conjugated polymeric material comprises polyaniline.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2 and 4 rejected under 35 U.S.C. 103(a) as being unpatentable over either of Takahashi et al. (US 5,177,330) or Brotz (US 6,161,382). Given the invention

of either as noted above, neither explicitly notes doping of the polyaniline. The applicants' note in their remarks however that such is common in the art. As such, it would have been obvious to one having ordinary skill in the art to employ the commonly used doped polyaniline in any of their inventions.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Additional prior art cited reads on at least some aspects of the claimed invention and should be considered by the applicants.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

*thomas M. Dougherty*  
Direct inquiry concerning this action to Examiner Dougherty at (703) 308-1628.

*thomas M. Dougherty*  
tmd

January 20, 2004

*Thomas M. Dougherty*  
THOMAS M. DOUGHERTY  
PRIMARY EXAMINER  
GROUP 2100